



Department of Commerce

Safety & Buildings Division

201 West Washington Avenue

P.O. Box 2658

Madison, WI 53701-2658

Evaluation # 200118-O

Wisconsin Building Products Evaluation

Material

Low Profile Access Floor
“Cablefloor®”

Manufacturer

FLEXSPACE, INC.
525 Boren Avenue
Seattle, WA 98109-5502

SCOPE OF EVALUATION

The low profile access floor system Cablefloor®, manufactured by FLEXSPACE, INC., has been evaluated for use as computer cabling access flooring. The low profile access floor system Cablefloor®, was evaluated in accordance with the Voluntary Approval requirements of **s. Comm 50.19(1)**, of the current Wisconsin Administrative Building And Heating, Ventilating And Air Conditioning Code, including the code sections listed below.

The low profile access floor system (6-inches or less in height), Cablefloor® meets that definition of an interior finish in accordance with **s. Comm 51.01(75a)(a)**. The low profile access floor system Cablefloor® has been evaluated for use as an interior finish in accordance with **s. Comm 51.07(1)(2)(a), (4), (5), and (6)**.

The low profile access floor system (6-inches or less in height), Cablefloor® has been evaluated for use in accordance with **s. Comm 51.03** for construction standard **Types 1-3** when sprinklered in accordance with the requirements of **s. Comm 52.01**. The low profile access floor system (6-inches or less in height), Cablefloor® has been evaluated for use in accordance with **s. Comm 51.03** for construction standard **Types 4 through 8**, *if fire blocked in accordance with the requirements of **s. Comm 51.02(24)**.

The low profile access floor system Cablefloor® has been evaluated for ramp use in accordance with s. **Comm 51.16(1)(b)**, and **(4)(f)**.

The low profile access floor system Cablefloor® has been evaluated for the minimum requirements of s. **Comm 53.10** for dead loads, s. **Comm 53.11** and **Table 53-I** for live loads.

DESCRIPTION AND USE

The low profile access floor system Cablefloor® is a raised floor system, consisting of wood fiber cement composite panels supported on a polypropylene modular base. See **Figure 1**. The system provides access for computer/electrical accessories. System weight is 5.3 pounds per square feet.

Electrical and communications utility services are intended to be installed in the void spaces below the panels and between the support cylinders of the modular base system, and to serve associate equipment placed on the surface of the raised flooring system.

The system is intended for use on concrete or masonry floors that are required to be either combustible or non-combustible construction.

Base Module: Each base module is formed from injection-molded polypropylene plastic, and measures approximately 6 square feet. The module includes cylinders spaced 5.9 inches on center, and interconnecting base strips. Each cylinder is 2-3/4 inches in diameter and 1-3/4 inches in height, and the wall thickness is 1/8-inch thick. The grid support system snaps together forming an interconnected grid of support cylinders. Cable tie-down points are molded into the grid system's base straps to secure electrical and communications utilities.

Access Panels: The panels measure 23.5 inches square by 0.72 inch thick. Milled from Tec 3000™ composite fiber cement (manufactured by MacMillian Guadiana S. A. de C. V.), the panels are fire and moisture-resistant. A 1/8-inch deep, 5/8-inch radius recess is milled into each corner of the exposed surface. Nylon corner clamps with screw fasteners install flush with the panel surface securing the panels to the support cylinders. Each panel weighs 18.5 pounds.

Ramp: *Ramp pieces measure 30 inches in length by 21 inches in width. The ramp consists of fire-retardant-treated plywood 0.75 inch thick, and fire-retardant-treated wood blocks spaced 6-3/32 inches apart along the plywood length. The leading edge of the plywood is in full contact with the supporting floor, and is 7-5/16 inches deep.

Accessories: Accessories include 1-1/2-inch diameter by 7/64-inch thick nylon corner clamps, and No. 12 by 2-inch long steel clamp screws.

Adhesive: A synthetic rubber, construction grade, mastic adhesive used to secure support cylinders to the supporting floor construction is, 3M Fastbond Construction Mastic No. 4323. The adhesive is applied to the bottom of every fourth support cylinder.

Figure 1.

Figure 2

Figure 3

TESTS AND RESULTS

Structural Loading: The allowable stress level uniform load of the system is 100 psf, and the allowable stress level concentrated load over an area 2-1/2 feet square is 2,000 pounds. The panels are capable of resisting a 300-pound concentrated load over a 3-inch diameter disk. Signed and calculations are on file with the department.

Access Panels: The MacMillian Guadiana S. A. de C. V. panels are subject to third-party inspection and labeling by Timberco, Inc. – dba TECO.

Intertek Testing Services, Report No. 491-7900, dated October 1999, containing results of the fire performance testing of the floor assembly for a 1-hour period in accordance with test methods developed by Dr. Gnatowski of Polymer Engineering Company Ltd., dated October 7, 1999. The results indicate that there is no flame propagation of fire damage to the floor assembly or in the concealed space beyond the perimeter of the furnace walls, after 60 minutes of fire exposure.

SGS U.S. Testing Company Inc., Report No. 740322-1, dated March 28, 1996, containing results of physical testing of the panels in accordance with ASTM E84. The results indicate a Flame Spread rating of 0 and a Smoke-Developed Index of 0, indicating a Class I interior finish classification.

SGS U.S. Testing Company Inc., Report No. 740322-2, dated March 28, 1996, containing results of physical testing of the panels in accordance with ASTM E648. The results indicate a critical radiant heat flux of greater than 1.06 watts/cm², indicating a Class I interior finish classification.

United States Testing Company Inc. (SGS U.S. Testing Company Inc.), Report No. 187968-1, dated August 31, 1993, containing results of physical testing of the modular base system polypropylene components in accordance with ASTM D1929. The test results indicate a self-ignition of 734 degrees Fahrenheit (390 degrees Celsius).

United States Testing Company Inc. (SGS U.S. Testing Company Inc.), Report No. 187968-2, dated August 31, 1993, containing results of physical testing of the modular base system polypropylene components in accordance with ASTM D635. The test results indicate a CC1 classification.

United States Testing Company Inc. (SGS U.S. Testing Company Inc.), Report No. 187968-3, dated August 31, 1993, containing results of physical testing of the modular base system polypropylene components in accordance with ASTM D2843. The test results indicate a smoke density rating less than 75 percent.

LIMITATIONS OF APPROVAL

Cablefloor® shall be installed in accordance with this evaluation and the manufacturer's installation instructions. Where the manufacturer's installation instructions differ from this evaluation, this evaluation shall be null and void.

Ramp pieces measure 30 inches in length by 21 inches in width, providing the 12:1 slope is in compliance with **s. Comm 69.26(1)(b)** and **ADAAG 4.8**.

Where the low profile access floor system (6-inches or less in height), Cablefloor® is part of a required means of egress, space limitations that prohibit the use of a 1:12 slope or less shall comply with **ADAAG 4.1.6(3)(a)** as stated in **Chapter 69** and **ADAAG 4.8.2**.

Where the low profile access floor system (6-inches or less in height), Cablefloor® is not part of a required means of egress slopes of ramps shall not exceed 1 foot of rise in 6 feet of run in accordance with **s. Comm 51.16(4)(f)**.

Handrails are not required on ramps with slopes of less than 1:20 in accordance with **s. Comm 51.161(1)(g)**.

Ramps constructed of fire-retardant-treated wood shall meet the fire-retardant-treated wood definition of **s. Comm 51.01(52)**.

Non-load bearing partitions located directly over the Cablefloor® are permitted when installed as shown in **Figures 2 and 3** of this evaluation.

The low profile access floor system (6-inches or less in height), Cablefloor® has been evaluated for use in accordance with **s. Comm 51.03** for construction standard **Types 1** through **3** when a sprinkler system is installed.

*The low profile access floor system (6-inches or less in height), Cablefloor® has been evaluated for use in accordance with **s. Comm 51.03** for construction standard **Types 4** through **8** if fire blocked in accordance with the requirements of **s. Comm 51.02(24)**.

When installed, the low profile access floor system Cablefloor®, shall not extend below a fire-resistive rated assembly, fire partition or, fire wall.

The sub-floor space created by the floor plate and pedestal shall not be used as an air plenum.

The use of the low profile access floor system Cablefloor® for exterior applications is beyond the scope of this evaluation.

As required per **s. Comm 50.12(3)** plan sets submitted for review shall include:

1. Design floor live loads to be applied to Cablefloor®;
2. Location of non-loadbearing partitions and fixed service equipment;
3. Details and notes describing the installation and construction of the Cablefloor® system consistent with this evaluation;
4. And where provided, details and notes describing the surface treatment, edge protection, capacity and minimum dimensions of ramp components of the Cablefloor® system consistent with this evaluation.

This evaluation does not address any computer/electrical accessories. The equipment shall be installed in accordance with National Electrical Code as adopted in **Chapter Comm 16**.

This approval will be valid through December 31, 2006, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Building Product Evaluation number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Revision Date:

Approval Date: July 9, 2001

By: _____

Lee E. Finley, Jr.
Product & Material Review
Integrated Services Bureau

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